



# Experimental Inquiry

## Self Assessment Rubric

**Experimental inquiry is the process of generating and testing explanation of observed phenomena.**

- A. *I use accurate and important information to suggest an explanation for something I am studying.*
1. I suggest a clear explanation for something I am studying. My explanation includes accurate and important information from a variety of sources. I check my information carefully to make sure it clearly explains what I observe.
  3. I suggest a clear explanation for something I am studying. My explanation includes accurate and important information.
  2. I suggest an explanation for something I am studying. I include some inaccurate information or leave out important information that would have made the explanation clearer.
  1. I suggest an explanation for something I am studying, but I include inaccurate or unimportant information and leave out important information.
- B. *I make a prediction about what would happen if my explanation is correct.*
4. I make a prediction about what would happen if my explanation is correct. The prediction can be tested and is based on the information in my explanation. I even add more information to show that I am increasing my knowledge of what I am studying.
  3. I make a prediction about what would happen if my explanation is correct. The prediction is based on the information in my explanation and can be tested.
  2. I make a prediction about what would happen if my explanation is correct, but the prediction is based on the incorrect use of information in my explanation or is a prediction that would be difficult to test.
  1. I make a prediction that cannot be tested.
- C. *I set up and carry out an experiment (or activity) to find out whether my prediction is accurate.*
4. I set up and carry out an experiment that tests all aspects of my prediction. The experiment also produces other useful information and gives answers to other questions related to my prediction. I carefully plan every step of the activity or experiment so that the results are accurate, clear, and usable.
  3. I set up and carry out an experiment that does a good job of testing the prediction. I get some accurate, clear, and usable results.
  2. I set up and carry out an experiment that tests some parts of my prediction but does not give me complete information. Some of the results are difficult to use in finding out whether my prediction is accurate.
  1. I set up and carry out an experiment, but it does not test the prediction. The set-up of the experiment is sloppy and my results are inaccurate or not usable.
- D. *When I try other solutions besides my first choice, I explain the reasons they were not my first choice and describe how well each of them helps me deal with the limits or barriers in my problem.*
4. I explain clearly and with details why I am testing other solutions besides my first choice. I describe the criteria I used to put the solutions in order of importance and tell how the solutions meet the criteria. I then explain how well each solution worked to help me deal with the limits or barriers in my problem.
  3. I explain the process I used to put my other solutions in order of importance. The process is clear and makes sense. I also describe how well the solutions helped me deal with the limits or barriers in my problem.
  2. I explain the process I used to put my other solutions in order, but the process is not very clear or has some errors; or I do not describe how each of the solutions worked.
  1. I explain the process I used to put my other solutions in order, but it makes no sense. I do not describe how well any of the solutions worked.

Adapted from McREL Institute